

**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT NO. 40682**

**I. INTRODUCTION**

This Class II Air Quality Control Renewal Permit is for the operation of an Autoclaved Aerated Cellular (AAC) Concrete Plant owned and operated by Enviroc, Inc. This is a renewal of Permit # 1001550.

**A. Company Information**

Facility Name: Enviroc AAC Plant

Facility Address: 3400 West Geronimo Drive (near Griffith Road exit and I-40)  
Mohave County, AZ

Mailing Address: PO Box 5056  
Lynnwood, WA 98046

**B. Attainment Classification**

This facility is in an Attainment Area with respect to all the criteria pollutants.

**II. FACILITY DESCRIPTION**

**A. Process Description**

The primary activity of the plant is the manufacture of a light composite block made of sand, cement, lime, and aluminum.

The process used to make the blocks is a process equivalent to the YTONG process. The YTONG process is known for the special mixture of raw materials and the use of air in the block to create a light weight and strong product. The YTONG process goes through three stages of development, the swelling of the raw material solution, the hardening of the block, and the cutting of the block into the appropriate dimensions.

The main emissions source at the plant is a natural gas 20.9 MMBtu/h boiler that is used during the swelling or rising phase of the YTONG process to cure the block. PM<sub>10</sub> emissions from conveyors, silos, and cutting are collected using baghouses and recycled back into the YTONG process. The baghouses are 99.5 percent efficient, and the left over PM<sub>10</sub> is then recycled using negative pressure inside the building.

A search for surrounding learning sites using the mapping technology developed by ADEQ's IT department was conducted for this facility. No learning sites were found within 2 miles of this facility.

**B. Air Pollution Control Equipment:**

The facility has installed dust collectors to minimize emissions from the cement, lime, gypsum and flyash silos. Manufacturing operations such as mixing, casting, cutting,

reinforcing material and autoclaving are wet operations and are performed within a building /enclosure.

### III. EMISSIONS

The emission calculations for the permit review process relied upon emission factors derived from the Environmental Protection Agency's (EPA) Compilation of Air Pollution Emission Factors (5th Edition).

**Table 1: Facility Emissions**

Pollutant	Emission (tons/year)
NO <sub>x</sub>	13.54
CO	8.43
PM <sub>10</sub>	0.84
SO <sub>x</sub>	1.52
VOC	0.61

### IV. APPLICABLE REGULATIONS

The applicable regulations were identified by the Department as part of the permitting process. If necessary, the source is required to list any additional regulations that may be applicable.

**Table 2: Verification of Applicable Regulations**

Unit	Date of Constr./Mod.	Control Device	Rule	Verification
AAC Manufacturing Process	N/A	N/A	A.A.C. R18-2-730	This standard is applicable to unclassified sources.
Boilers – NSPS	N/A	N/A	40 CFR 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.
Generators	N/A	N/A	A.A.C. R-18-2-719	Standards of Performance for Existing Stationary Rotating Machinery.
Fugitive dust sources	N/A	Water and other reasonable precautions.	Article 6 of the AAC	These standards are applicable to all fugitive dust sources.
Mobile sources	N/A	Water Sprays/Water Truck for dust control	Article 8 of the AAC	Opacity requirements for smoke and dust for mobile sources (construction equipment, etc.).
Spray painting operations	N/A	N/A	A.A.C. R-18-2-727, SIP R9-3-527.C	This standard is applicable to any spray-painting operation.
Demolition / renovation operations	N/A	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.
Abrasive blasting operations	N/A	N/A	R18-2-726	This standard is applicable to any sand blasting or other abrasive blasting operation.

## V. PREVIOUS PERMITS

**Table 3: Details of Previous Permit**

Date of Permit Issuance	Permit Number	Application Basis
June 12, 2001	1001550	Operating Permit

## VI. PREVIOUS PERMIT CONDITIONS

This operating permit was issued to Enviroc, Inc. on June 12, 2001, for the operation of AAC Concrete Plant, generator and boiler.

**Table 4: Permit # 1001550**

Condition No.	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Att. A.	x				General Provisions - Revised to represent most recent permitting language.
Att.B.I		x			Boiler NSPS requirements
Att.B.II		x			Requirements for Unclassified Sources
Att.B.III		x			Requirements for Fugitive Dust Sources
Att.B.IV		x			Requirements for Mobile Sources
Att.B.V		x			Requirements for Other Periodic Activities

## VII. MONITORING AND RECORDKEEPING REQUIREMENTS

### A. Boiler - NSPS

#### 1. Recordkeeping Requirements

The Permittee is required to record and maintain records of the amounts of fuel combusted during each day.

### B. Fugitive Dust

#### 1. Monitoring Requirements

The permit requires quarterly EPA Reference Method 9 of fugitive emissions by a certified Method 9 observer.

#### 2. Recordkeeping Requirements

The Permittee is required to record the emission point being observed, location of the observer, date, time and the results of all observations made, as well as the name of the observer who conducted the test. In the event of opacity going

beyond the limit, the Permittee must keep a record of the corrective action taken to bring the opacity below the standard.

#### **C. AAC Concrete Manufacturing Process**

##### **1. Monitoring Requirements**

The permit requires monthly surveys of visual emissions from the AAC Manufacturing Process to be performed by a certified Method 9 observer. If the opacity of the emissions observed appears to exceed the standard, the observer is required to conduct a certified EPA Reference Method 9 observation.

##### **2. Recordkeeping Requirements**

The Permittee is required to record the emission point being observed, date, time and the results of all visible emission surveys or Method 9 observation made monthly, as well as the name of the observer who conducted the test. In the event of opacity going beyond the limit, the Permittee will keep a record of the corrective action taken to bring the opacity below the standard.

#### **D. Generators**

##### **1. Monitoring Requirements**

The permit requires monthly surveys of visual emissions from the internal combustion engine stack to be performed by a certified EPA Reference Method 9 observer. If the opacity of the emissions observed appears to exceed the standard, the observer is required to conduct a certified EPA Reference Method 9 observation.

##### **2. Recordkeeping Requirements**

a. The Permittee is required to record and maintain a log of the daily hours of operation and calculate a rolling twelve-month total of hours of operation of the internal combustion engines at the end of each month.

b. The Permittee is required to record the emission point being observed, date, time and the results of all visible emission surveys or Method 9 observations made, as well as the name of the observer who conducted the test. In the event of opacity going beyond the limit, the Permittee will keep a record of the corrective action taken to bring the opacity below the standard.

### **VIII. LIST OF ABBREVIATIONS**

A.A.C.	Arizona Administrative Code
AAC	Autoclaved Aerated Cellular
ADEQ	Arizona Department of Environmental Quality
EPA	Environmental Protection Agency
lb/hr.	Pound per Hour
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Nominally less than 10 Micrometers